

REMARKS

Applicants respectfully request reconsideration. Claims 1-26 were previously pending in this application. By this amendment, Applicants are amending claims 1, 7, 9-14, and 22-26. New claims 27-31 have been added. As a result, claims 1-31 are pending for examination with claims 1, 9-14, and 22-26 being independent claims. No new matter has been added.

Applicants acknowledge the courtesies extended by Examiners Hall and Neckel during a telephone interview with the undersigned on March 20, 2008. The substance of the interview is summarized in the remarks set forth herein below.

Rejections under 35 U.S.C. §112

Claims 1, 7 and 22-26 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. In particular, Examiner states that claims 1, 7, and 22-26 are rendered indefinite because it is unclear that the “fine particles” referred to in this claim is within a particular range of particle size.

As discussed during the interview, Applicants have amended claims 7, 14, and 22-26 to recite the semiconductor fine particles having an average particle diameter of primary particles ranging between approximately 1 nm and approximately 200 nm. In this respect, the Examiners agreed that it is now clear what range of particle size “fine particles” refers to.

Accordingly, withdrawal of the rejection of these claims is respectfully requested.

Rejections Under 35 U.S.C. §102

Claims 1-6 and 9-17 stand rejected under 35 U.S.C. §102 as being anticipated by Meinhardt et al., “Optoelectronic Device made from Multilayer and Molecularly Doped Organic Layers,” SPIE Conference on Organic Photonic Materials and Devices Vol. 3623, January 1999 pages 46-57.

Meinhardt describes an optoelectronic device with multilayered heterostructure that optimizes charge transfer between molecularly doped organic layers. Regarding the layered structure of Meinhardt, an indium doped tin oxide (ITO) layer is coated on a glass substrate with a layer of polyethylene dioxythiophene (PEDOT) doped with polystyrenesulphonate (PSS) formed

above the ITO layer. An aluminum backelectrode is also formed above the PEDOT layer with several organic layers disposed therebetween. In the interview, the undersigned discussed this structure of Meinhardt with the Examiners in relation to the claims.

Independent claims 1, and 9-13 have been amended to recite the metal film on the intermediate film, the metal film directly contacting the intermediate film. In this regard, Meinhardt does not disclose an intermediate film on a metal oxide film and a metal film on the intermediate film, with the metal film *directly contacting* the intermediate film.

In addition, independent claims 14, and 22-26 have been amended to recite the semiconductor electrode on the intermediate film, the semiconductor electrode directly contacting the intermediate film. Meinhardt does not disclose an intermediate film on a metal oxide film and a semiconductor electrode on the intermediate film, with the semiconductor electrode *directly contacting* the intermediate film.

The Examiners agreed that these clarifying amendments would distinguish the independent claims from Meinhardt and, as a result, would require a new search to be performed. Because claims 2-6 depend directly from independent claim 1, and claims 15-17 depend directly from independent claim 14, for at least the same reasons as stated above for claim 1, these claims should also be in condition for allowance.

Accordingly, withdrawal of this rejection is respectfully requested.

Rejections Under 35 U.S.C. §103

Claim 7 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Meinhardt et al. "Optoelectronic Device made from Multilayer and Molecularly Doped Organic Layers," SPIE Conference on Organic Photonic Materials and Devices Vol. 3623, January 1999 pages 46-57 and in further view of Takahashi et al. U.S. Patent No.6,261,684.

Claims 8, 19 and 21 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Meinhardt et al. "Optoelectronic Device made from Multilayer and Molecularly Doped Organic Layers," SPIE Conference on Organic Photonic Materials and Devices Vol. 3623, January 1999 pages 46-57 and in further view of Kawakami U.S. Patent No., 5,320,723.

Claims 18 and 20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Meinhardt et al. Optoelectronic Device made from Multilayer and Molecularly Doped Organic Layers," SPIE Conference on Organic Photonic Materials and Devices Vol. 3623, January 1999 pages 46-57 and in further view of Li et al., U.S. Published Patent Application No. 2003/0188776.

Claims 22-26 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Meinhardt et al. Optoelectronic Device made from Multilayer and Molecularly Doped Organic Layers," SPIE Conference on Organic Photonic Materials and Devices Vol. 3623, January 1999 pages 46-57 and in further view of Takahashi et al. U.S. Patent No.6,261,684.

For at least the same reasons stated above, because claims 7 and 8 depend directly from independent claim 1, and claims 18-21 depend directly from independent claim 14, these claims should be in condition for allowance. In addition, as independent claims 22-26 were amended to further distinguish over Meinhardt, for at least the same reasons as stated above, these claims should also be in condition for allowance.

Accordingly, withdrawal of this rejection is respectfully requested.

New Claims Added

Applicants have added new claims 27-31 directed to an electrolytic layer disposed between a metal film and a semiconductor layer as well as a method for injecting an electrolytic layer between a metal film and a semiconductor layer. Support for these claims may be found in the specification, at least, on page 58, lines 20-26, and on page 67, lines 17-24. As these claims depend directly from independent claims 1, 9, 14, 22, and 25, respectively, Applicants believe that claims 27-31 should be in condition for allowance.

CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

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Respectfully submitted,

By:

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